National Highway Traffic Safety Administration
Technical Assistance Program
Iowa Statewide EMS Re-Assessment

Contents

Introduction

The State of Iowa is the only state that is bordered by rivers on two sides. The state is 310 miles from east to west and 199 miles from north to south. The total area of the state is 56,857 square miles. Sixty percent of the land is covered by agricultural crops. Iowa is composed of 99 counties though there are 100 county seats, Lee County having two county seats. There are 114, 430 miles of public roadway in Iowa which ranks it as number 14 in the nation for miles of roadway, while being number 26 for size and 30th for population.

The 2014 U.S. Census estimates Iowa having a population of more than 3.1 million individuals. Forty-nine percent of the population is male and 51 percent female. Sixty-one percent of the population resides in the urban areas of the state. The census bureau also indicates that 6.3 percent of the population is under 5 years of age, 23 percent under 18 years of age, and 14 percent of the population is 63 years of age or older.

While Iowa is often associated with an agrarian economy, agricultural products account for only 3.5 percent of the gross state product. Manufacturing is the largest component of the gross state product, though admittedly much of the manufacturing is related to agricultural products. Iowa's leading export is farm tractors, followed by pork then soybeans. Other large players in Iowa's economy are financial services, insurance, and healthcare.

<u>Milestones in the Iowa EMS Office</u>

1969	State EMS section was established at IDPH
1970	First EMT-Ambulance level providers trained
1974	Crash Injury Management/First Responder implemented
1979	Advanced EMTs started with the Iowa Board of Medical Examiners
1987	Iowa EMS Plan completed by an EMS task force
1989	EMS training funds established
1990	Iowa white paper developed EMS regions established
1991	NHTSA Statewide Assessment completed
1993	Department of Public Health becomes EMS lead agency
1994	EMS for Children grant received
1995	Minimum ambulance standards set Iowa Trauma System Development Act passed

	Implemented National Standard Curriculum for First Responder and EMT-Basic
1997	Iowa Agenda for the Future completed
1998	Begin community injury prevention grants Occupant protection certification program begins
1999	Implementation of National Standard Curriculum for the EMT-Intermediate and EMT-Paramedic
2000	Trauma System fully implemented First emergency medical care provider scope of practice adopted
2001	First system development grants Critical Care Paramedic curriculum developed
2002	First EMS status report completed
2005	Stakeholder regional meetings held
2007	Iowa becomes fully NEMSIS compliant First draft of System Standards completed
2011	Implemented National EMS Education Guidelines for all levels
2012	Paul Coverdell National Acute Stroke grant received
2013	Require Paramedic training programs to have national accreditation
2014	Bureau of EMS merges with Center for Disaster Operation and Response to form Bureau of Emergency and Trauma Services

A. Regulation and Policy

Each State should embody comprehensive enabling legislation, regulations, and operational policies and procedures to provide an effective state-wide system of emergency medical and trauma care and should:

- **Establish the EMS program and designate a lead agency;**

Iowa Code 147A (attachment 1) identifies the Department of Public Health as the lead agency for the coordination and implementation of emergency medical. The code gives rulemaking authority for the operation of service programs (147A.4.1.a), the certification of emergency medical care providers (147.4.2), and the authorization of training programs (147A.4.4). The code also establishes a statewide trauma care system (147A.21-28).

Outline the lead agency's basic responsibilities and authorities including licensure and certification including the designation of emergency medical services regions;

Iowa's EMS delivery is not designed on a regional model.

- **Require comprehensive EMS system planning;**

Local system development/standards planning has been directed through funding streams to County Boards of Supervisors or Boards of Health per *IAC 641—140* (Attachments 13, 59, 60).

Working with stakeholders, the Bureau has developed a set of System Standards (attachment 23). The Iowa EMS System Standards are a change initiative that provides a consistent and accountable approach to promoting and protecting the health of Iowans through EMS. Utilizing the Iowa EMS System Standards will attain the goal of designing and implementing an integrated, measurable, and sustainable state wide EMS System.

The Division of Acute Disease Prevention, Emergency Response and Environmental Health was established within the department. The division is required to coordinate the administration of this division with federal, state, and local agencies and officials to:

a. Coordinate with the department of homeland security and emergency management the administration of emergency planning matters which involve the public health, including development, administration, and execution of the public health components of the comprehensive emergency plan and emergency management program pursuant to section *IAC 29C.8*.

EMS is an integral part of overall state plans.

- **Establish a sustainable source of funding for the EMS and trauma system;**

EMS funding comes from state general fund appropriations and federal grants (attachment 32).

For FY2014-2015, approximately $2.6 million was budgeted for the Bureau of Emergency and Trauma Services. The sources of funding available to support the development, operations, and management of EMS are: Legislated general funds, Block grant, FLEX grant, HPP/PHEP Preparedness Cooperative Agreement, EMSC, and the Governor's Traffic Safety Bureau.

- **Require prehospital data collection which is compatible with local, State and national efforts such as the National EMS Information System (NEMSIS) and evaluation;**

  Authorized services must submit reportable patient data to the department per *IAC 641—132.8(3)r* (attachment 5). Reportable patient care data is identified in the Iowa EMS Patient Registry Data Dictionary (attachment 19). The current data dictionary is based on NEMSIS 2. A data dictionary based on NEMSIS 3 elements has been developed but has not yet been adopted by rule.

- **Provide authority to establish minimum standards related to system elements such as personnel, services, specialty care facilities and regional systems and identify penalties for noncompliance;**

  The Department is authorized in Iowa Code 147A.4.1.a to establish rules pertaining to the operation of service programs concerning physician supervision, necessary equipment, staffing, and reporting. Minimum staffing is identified *in IAC 641—132.8(1)c*, requiring one certified provider and a licensed driver. Penalties for non-compliance on the rules are identified in *IAC 641—132.10(3)*. The enabling legislation does not address specialty care facilities or regional systems.

- **Provide for an injury/trauma prevention and public education program; and**

  Iowa Code 147A.24 identifies the tasks of the Trauma System Advisory Council (TSAC). One of the tasks of the council is to promote public information and education activities for injury prevention.

- **Integrate the special needs of children and other special populations throughout the EMS system.**
- **Integrate pediatric EMS needs into State statutes, rules and regulations.**

  While pediatrics and special needs are not specifically identified in the code or administrative rules, the Department has developed protocols (attachment 18) and standards with an "all-hazards" and all-ages approach. The state has had a very active EMS for Children (EMSC) program and has a American Academy of Pediatrics representative on the EMS Advisory Council (*IAC 641—130.3(2)a(7)*).

Previous Assessment Recommendations

- Develop a comprehensive EMS plan utilizing a total systems approach.
- Enact a revised EMS statute that would accomplish the following:
    - Designate and authorize the Iowa Department of Public Health as the State's lead EMS agency for EMS system development and management;
    - Initiate mandatory licensure for all first responder, ambulance, and air medical services;
    - Place the responsibility for certification of all EMS personnel in the department of public health;
    - Establish a dedicated funding source to continue adequate support of the EMS training fund, the EMS equipment fund, and other needed activities; and
    - Staff and fund the Iowa Department of Public Health EMS Section at an adequate level to continue its existing functions and to take on expanded responsibilities.
    - Implement mechanisms to provide for the ongoing support of local or regional EMS operations, including local taxing authority, and appropriate service revenue generation.

Progress Since Previous Assessment

Various EMS plans have been developed and updates, with the most recent being the Iowa EMS Agenda for the Future completed in 2005.

The Department was identified as the State's lead EMS agency.

All non-transport, ambulance, and air medical services must be authorized by the department.

The Department certifies all emergency medical care providers.

B. Resource Management

Each State EMS lead agency should identify, categorize, and coordinate resources necessary for establishment and operation of regionalized, accountable EMS and trauma systems. The lead agency should:

- **Maintain a coordinated response to day-to-day emergencies as well as mass casualty events or disasters and ensure that resources are used appropriately throughout the State;**

  In September 2014 the IDPH Center for Disaster Operations and Response merged with the Bureau of EMS to form the Bureau of Emergency and Trauma Services. The Center for Disaster Operations and Response was formed after 9/11 to protect the health of Iowans by preparing for public health emergencies from threats such as terrorism, to natural disasters like floods and tornadoes, to disease outbreaks like pandemic flu that may affect the health of all Iowans. The Bureau of EMS was designated as the lead agency responsible for the development, implementation, coordination and evaluation of Iowa's EMS system.

  The newly formed Bureau of Emergency and Trauma Services allows for greater awareness and involvement in day to day responses to emergencies and disasters. The federal resources available are partially being utilized to train, exercise and prepare first responders. EMS services and providers have become substantially involved in recent planning for highly infectious disease preparation and response.

  EMS services in Iowa have been provided a Mass Casualty Incident Protocol and a Mass Casualty Incident Response System (MCIRS) template to provide a standardized system that will provide needed resources to an Incident Commander in a more effective and efficient manner to increase the preservation of life and quality of care given during a mass casualty incident.

  EMS providers in the state have been involved in healthcare preparedness coalition planning and preparedness in Community Preparedness (Capability 1) and Medical Surge (Capability 10) from the public health and hospital emergency preparedness programs.

- **Have policies and regulations in place to assure equal access to basic emergency care for all victims of medical or traumatic emergencies;**

  Service program levels of care and staffing standard can be found at *IAC 641—132.8* Service program levels of care and staffing standards**.** A service program seeking ambulance authorization is required to apply at a level of service and maintain an adequate number of ambulances and personnel to provide 24x7 coverage. The number of ambulances and personnel to be maintained is determined by the (1) number of calls; (2) service area and population; and (3) availability of other services in the area.

- **Provide adequate triage, including trauma field triage, and transport of all victims by appropriately certified personnel (at a minimum, trained to the emergency medical technician [EMT] level) in properly licensed, equipped, and maintained ambulances**;

  For mass casualties, START and JumpSTART triage is identified in the service protocols (p. 88-89). For trauma transport, the Out-of-Hospital Trauma Triage Destination Decision Protocol, adult and pediatric, (attachment 18 pp. 79, 80) is adopted *by IAC 641—135.2(1)a*.

  The Out-of-Hospital Trauma Triage Destination Decision Protocol directs transport of trauma patients to appropriate trauma care facilities. State protocols recommend the transport of appropriate patients to cardiac (p. 84) and stroke centers (p. 86).

  641—132.8c requires every EMS service in the state to provide as a minimum, on each ambulance call, the following staff:
  (1) One currently certified EMT-B or EMT.
  (2) One currently licensed driver. The service shall document each driver's training in CPR (AED training not required), in emergency driving techniques and in the use of the service's communications equipment.

  Ambulances in Iowa must meet the National Truck and Equipment Association's Ambulance Manufacturer Division performance specifications (*IAC 641--132.8(4)a*). Equipment inventories must be approved by the service's medical director *(IAC 641—132.8(4) b*). Services must maintain a preventative maintenance program (*IAC 641—132.8(5)*).

- **Provide transport to a facility that is appropriately equipped, staffed and ready to administer to the needs of the patient including specialty care hospitals (section 4: Transportation);**

  State protocols (attachment 18) recommend the transport of appropriate patients to cardiac (p. 84) and stroke centers (p. 86).

  The Out-of-Hospital Trauma Triage Destination Decision Protocol (attachment 18, p. 79, 80) directs transport of trauma patients to appropriate trauma care facilities.

- **Appoint an advisory council, including pediatric EMS representation, to provide broad-based input and guidance to the state EMS system and to provide a forum for cooperative action and for assuring maximum use of resources;**

  The EMS Advisory Council (EMSAC) is established in Iowa Code 147A.2, including membership. IAC 641—130 (attachment 3) includes the rules for the EMSAC. EMSAC advises the director and develops policy recommendations concerning the regulation, administration, and coordination of emergency medical services in the state. Minutes from the most recent EMSAC meeting are included (attachment 33).

- **Coordinate with State Highway Safety Agency and other State Agencies in the development of the Strategic Highway Safety Plan to ensure that EMS system information is used to evaluate highway safety problems and to improve post-crash care and survivability.**

  The Department participates with other public safety agencies in the state and participated in the development of the 2012 State Highway Safety Plan to evaluate highway safety problems and to improve post-crash care and survivability (attachment 20).

Previous Assessment Recommendations

- Identify and classify all existing prehospital and hospital EMS resources as part of the development of a comprehensive, statewide EMS plan for Iowa.
- Enact legislation to ensure that 100% of the EMS units in Iowa meet prescribed licensing standards. These standards should address operational issues, including equipment, staffing, and appropriate dispatching of basic and advanced services.
- Ensure that Iowa EMS personnel are trained and equipped to handle the unique needs of pediatric as well as adult emergency situations.

Progress Since Previous Assessment

The Department can identify all services in the state,

All services in the state must meet minimum requirements.

Pediatric training is part of all initial education, optional can be acquired.

C. Human Resources and Education

Each State should ensure that its EMS system has essential trained and certified/licensed persons to perform required tasks. These personnel include: first responders (e.g., police and fire), prehospital providers (e.g., emergency medical technicians and paramedics), communications specialists, physicians, nurses, hospital administrators, and planners. Each State should provide a comprehensive statewide plan for assuring a stable EMS workforce including consistent EMS training and recruitment/retention programs with effective local and regional support. The State agency should:

- **Ensure sufficient availability of adequately trained and appropriately licensed EMS personnel to support the EMS system configuration;**

  The number of emergency medical care providers has been consistent in the state over the previous decade (attachment 34).

- **Assure an ongoing state EMS personnel needs assessment that identifies areas of personnel shortage, tracks statewide trends in personnel utilization and which establishes, in coordination with local agencies, a recruiting and retention plan/program;**

  In 2014 the Department and Iowa Workforce Development worked together to develop the Iowa Paramedic and EMT Labor Market Analysis (attachment 32) to initially track paid providers, determine utilization and compare salary. This will be used as base information for further development.

- **Establish EMT as the state minimum level of licensure for all transporting EMS personnel;**

  Transporting EMS services must be authorized, at a minimum, at the EMT level (attachment 5: *IAC 641—132.8(1)a*).

- **Routinely monitor training programs to ensure uniformity, quality control and medical direction;**

  Training programs are authorized for up to five years (attachment 4, *IAC 641—131.5(10)k*). Before being reauthorized, the training program must submit an application (*IAC 641—131.5(10)b,* (attachment 70) and the department must perform a site visit (*IAC 641—131.5(10)e*). Training programs offering paramedic courses must be accredited by, or have submitted an application to the Committee on Accreditation for the Emergency Medical Services Profession (*IAC 641—131.5(10)a*).

- **Use standardized education standards throughout the State that are consistent with the National EMS Education Standards;**

  641—131.5(147A) Training programs—standards, application, inspection and approval.

  Training programs must use applicable United States Department of Transportation Education Standards (*IAC 641—131.5(1)a*).

- **Ensure availability of continuing education programs, including requirements for pediatric emergency education**

  Continuing education courses may be approved by an EMS training program or by the Continuing Education Coordinating Board for EMS (*IAC 641—131.4(6)*). Pediatric topics are included in the designation of formal education that is required for providers (*IAC 641—131.4(5)c) and 131.4(6)*)

  The following standards shall be applied for approval of continuing education:

  Courses approved as formal education must meet the following criteria:

  (1) Involve live interaction with an instructor or be an Internet-delivered course approved by CECBEMS; and

  (2) Be based on the appropriate department curricula for EMS providers and include one or more of the following topic areas:

    - airway management,
    - patient assessment,
    - trauma assessment and management,
    - medical assessment and management,
    - behavioral emergencies,
    - obstetrics,
    - gynecology,
    - pediatrics,
    - Patient care record documentation.

- **Require instructors to meet State requirements;**

  Primary instructors must be endorsed as EMS-Instructors (*IAC 641—131.5(4)c*). EMS-Instructors must successfully complete an EMS-Instructor course based on curriculum approved by the department (*IAC 641—131.1*) and attend an EMS-Instructor update each certification period (*IAC 641—131.5(5)b(6)*).

- **Assure statutory authority , rules and regulations to support a system of EMS personnel licensure that meets or exceeds the national EMS Scope of Practice Model, new National Education Standards, as they are available, and other aspects of the EMS Education Agenda for the Future**

  The department has regulatory authority for EMS Training Programs in Iowa Code 147A.4.4 (attachment 1).

  641—131.5(147A) Training programs—standards, application, inspection and approval.

- **Monitor and ensure the health and safety of all EMS personnel.**

  There is no mechanism in place.

<u>Previous Assessment Recommendations</u>

• Enact basic care legislation to assure that all ambulances are staffed by at least one certified EMT-A.
• Discontinue the certification of Emergency Rescue Technicians through the EMS Section due to limited resources.
• Develop a process whereby the practical certification examination is standardized and administered by staff unrelated to the training entity.
• Revise recertification to require EMS personnel to complete written and practical examinations.
• Develop a program to standardize and make available dispatcher training throughout the State.
• Formalize an orientation process for medical directors, including physician designees.
• Revise training standards at all levels to require physician participation in the delivery of all advanced training courses.

<u>Progress Since Previous Assessment</u>

All ambulance services are staffed by at least one certified EMT.

The Emergency Medical Responder endorsement has been discontinued.

Training programs continue to coordinate the practical examinations.

All emergency medical care providers must complete the NREMT cognitive and psychomotor exams (*IAC 641—131.4(1)f*).

Dispatcher training requirements exist.

Medical directors must complete a Medical Director Workshop within one year of taking the position.

All training program are required to have active medical director involvement.

D. Transportation

Each State should require safe, reliable EMS transportation. States should:

- **Develop statewide EMS transportation plans, including the identification of specific EMS service areas and integration with regionalized, accountable systems of emergency care;**

641—132.1(147A) Definitions.
Transport agreement" means a written agreement between two or more service programs that specifies the duties and responsibilities of the agreeing parties to ensure appropriate transportation of patients in a given service area.

132.8(2) A service program seeking nontransport authorization shall:
b. For staffing purposes provide, as a minimum, a transport agreement.

132.8(3) Service program operational requirements. Ambulance and nontransport service programs shall:
p. Ensure a response to requests for assistance when dispatched by a public safety answering point within the primary service area identified in the service program's authorization application (attachments 5, 45).

- **Implement regulations that establish regionalized, accountable systems of emergency care and which provide for the systematic delivery of patients to the most appropriate specialty care facilities, including use of the most recent Trauma Field Triage Criteria of the American College of Surgeons/Committee on Trauma;**

For trauma transport, the Out-of-Hospital Trauma Triage Destination Decision Protocol, adult and pediatric, is adopted by *IAC 641—135.2(1)a*. The Out-of-Hospital Trauma Triage Destination Decision Protocol directs transport of trauma patients to appropriate trauma care facilities. State protocols recommend the transport to appropriate cardiac and stroke centers (attachment 18 pp 79, 80, 84, 86).

- **Develop routine, standardized methods for inspection and licensing of all emergency medical transport services and vehicles, including assuring essential pediatric equipment and supplies;**

Service program authorization is for up to three years (*IAC 641—132.7(1)e*). The Department inspects each service program at least once every three years (*IAC 641—132.7(4)a*).

132.8(4) Equipment and vehicle standards. The following standards shall apply: All EMS service programs shall carry equipment and supplies in quantities as determined by the medical director and appropriate to the service program's level of care and available certified EMS personnel and as established in the service program's approved protocols.

132.8(5) Preventative maintenance. Each ambulance service program shall document a preventative maintenance program to make certain that vehicles are fully equipped and maintained in a safe operating condition.

- **Establish a minimum number of personnel at the desired level of licensure on each response and delineate other system configuration requirements if appropriate;**

  641—132.8(147A) Service program levels of care and staffing standards.
  132.8(1) A service program seeking ambulance authorization shall:
  b. Maintain an adequate number of ambulances and personnel to provide 24-hour-per day, 7-day-per-week coverage. Ambulances shall comply with paragraph 132.8(1)*"d."*

  c. Provide as a minimum, on each ambulance call. The following staff:
  (1) One currently certified EMT-B or EMT,
  (2) One currently licensed driver.

  d. Submit an EMS contingency plan that will be put into operation when coverage pursuant to the 24/7 rule in paragraph 132.8(1)*"b"* is not possible due to unforeseen circumstances (attachment 46).

- **Assure coordination of all emergency transports within the EMS system, including public, private, or specialty (air and ground) transport and including center(s) for regional or statewide EMS transportation coordination and medical direction if appropriate**

  Coordination of transports is not regulated by the Department. Local EMS Systems coordinate transports based on local resources. Iowa does not operate a regional system nor provide statewide medical direction.

- **Develop regulations to ensure ambulance drivers are properly trained and licensed**.

  641—132.8(147A) Service program levels of care and staffing standards
  Minimum Staff:
  (1) One currently certified EMT-B or EMT.
  (2) One currently licensed driver.
  One currently licensed driver. The service shall document each driver's training in CPR (AED training not required), in emergency driving techniques and in the use of the service's communications equipment. Training in emergency driving techniques shall include:
  1. A review of Iowa laws regarding emergency vehicle operations.
  2. A review of the service program's driving policy for first response vehicles, ambulances, rescue vehicles or personal vehicles of an emergency medical care provider responding as a member of the service.

Previous Assessment Recommendations

• Enact legislation to bring all ambulance and first responder services under EMS regulations.
• Implement an ambulance service management program to enhance the operational efficiency of EMS services.
• Develop a process to evaluate need and necessity prior to new services being licensed.
• Consider the development of a statewide bid process to assist in the purchase of emergency vehicles and equipment for state licensed services at a reduced cost.

Progress Since Previous Assessment

All non-transport and ambulance services must be authorized by the department.

E. Facilities

It is imperative that the seriously injured (or ill) patient be delivered in a timely manner to the closest appropriate facility. Each State should ensure that:

- **Both stabilization and definitive care needs of the patient are considered;**

  The department has established criteria for the classification of Trauma Care Facilities (attachment 7) and for the transport of trauma patients to Trauma Care Facilities (attachment 8). Stroke facilities are also designated (attachment 24), though not designated by Iowa Code. The State Protocols include guidance for the transport of stroke and STEMI patients (attachment 18, pp84, 86).
  The EMS for Children program also looks at facilities to assure pediatric readiness. The Iowa EMSC program participated in the national pediatric readiness project and had a 100 percent response rate (attachment 44).

- **There is a statewide and medically accountable regional system, including protocols and medical direction, for the transport of patients to state-designated specialty care centers;**

  Facilities self-designate, there is no state designation.

- **There is state designation of specialty medical facilities (e.g. trauma, burns, pediatric, cardiac, etc.) and that the designation is free of non-medical considerations and the designations of the facilities are clearly understood by medical direction and prehospital personnel;**

  All emergency department nursing staff in every trauma care facility are required to have Trauma Nursing Core Course certification. All Emergency Department physicians are required to have attended ATLS.

- **Hospital resource capabilities (facility designation), including ability to stabilize and manage pediatric emergencies, are known in advance, so that appropriate primary and secondary transport decisions can be made by the EMS providers and medical direction;**

  There is not statewide authority for this.

- **Agreements are made between facilities to ensure that patients, including pediatric patients, receive treatment at the closest, most appropriate facility, including facilities in other states or counties;**

  There is no statewide policy for hospital diversion. Each hospital develops diversion policies as needed.

- **Hospital diversion policies are developed and utilized to match system resources with patient needs – standards are clearly identified for placing a facility on bypass or diverting an ambulance to appropriate facilities.**

Previous Assessment Recommendations

- Conduct a statewide inventory of acute care hospital emergency and inpatient capabilities.
- Distribute the results of this inventory to the EMS service medical directors for use in prehospital triage planning.
- Develop a program to assure that every hospital can provide optimal resuscitation based on its resources.
- Establish prehospital triage and inter-hospital transfer protocols based on local and regional capabilities.
- Encourage appropriate hospital involvement in local emergency medical services.
- Define each hospital's role within the overall EMS system.

Progress Since Previous Assessment

There is a statewide facility inventory available for trauma and stroke care.

Prehospital triage and transport guidance is in place for trauma, stroke and STEMI.

System standards have been developed to ensure the involvement of hospital in the local system.

F. Communications

An effective communications system is essential to EMS operations and provides the means by which emergency resources can be accessed, mobilized, managed, and coordinated. Each State should assure a comprehensive communication system to:

- **Begin with the universal system access number 911;**

  The Code of Iowa, Chapter 34A, states that the director of Iowa Homeland Security and Emergency Management shall appoint a program manager for the enhanced 9-1-1 program in Iowa. The program manager shall act under the supervisory control of the HSEMD director and in consultation with the E-911 Communications Council.

  In Iowa, enhanced 9-1-1 phone service for land and wireless phones is provided for by the Code of Iowa**,** Chapter 34A**,** and the Iowa Administrative Code, Section 605, Chapter 10. (attachments 28, 29, 61, 62)

- **Strive for quick implementation of both wire line and wireless enhanced 911 services which make possible, among other features, the automatic identification of the caller's number and physical location;**

  All 99 Iowa counties have the capability of accepting wireless enhanced 9-1-1 Phase II service, which provides the call taker at the public safety answering point with latitude/longitude coordinates so they can more readily locate the person who has placed the 9-1-1 call.

- **Strive to auto-populate prehospital patient care report (NEMSIS compliant) with all relevant times from the public safety answering point (PSAP);**

  Most PSAP's transmit the call data via email once the call is closed out. All PSAP's that have a Computer Aided Dispatch (CAD) software platform have this capability to send as long as the receiving agency has the technology to receive.

- **Provide for emergency medical dispatch training and certification for all 9-1-1 call takers and EMS dispatcher.**

  All persons employed primarily as telecommunicators must successfully complete an approved basic training course within one year of employment.). The Iowa Law Enforcement Academy (ILEA) administers this Basic 40 hour program and the *IAC 501-13.2* requires continuing education training. (attachment 30)

  This is basic dispatch training. EMD training is typically vendor-specific training in conjunction with the medical director. There are very few EMD-trained PSAPs in Iowa.

- **Provide for priority medical dispatch;**

  Typically vendor-specific training in conjunction with the medical director.

- **Provide for an interoperable system that enables communications from dispatch to ambulance, ambulance to ambulance, ambulance to hospital, hospital to hospital and ambulance to public safety communications.**

  Iowa currently suggests the use of VHF EMS Radio Plan but it is not required. The state Interoperable Communications System Board meets monthly to address all issues of interoperability and they are currently working very aggressively on a state-wide system. Per Iowa Code, the department of public health has a seat on the board (http://www.isicsb.iowa.gov/board-members.html) and a bill is introduced in the Iowa Legislature this year to mandate a seat on the board for EMS representation.

- **Provide for prioritized dispatch of EMS and other public safety resources.**

  Statewide prioritized dispatch is not in place.

- **Ensure that the receiving facility is ready and able to accept the patient**

  This is not prescribed by law or rule but is a standard practice in the EMS community to notify the receiving hospital while enroute to provide a patient report. The amount of time prior to arrival would be by local practice and may not be uniform. There are also standard practices for notification of surrounding area trauma, STEMI, and MCI cases.

- **Provide for dispatcher training and certification standards**.

  All persons employed primarily as telecommunicators must successfully complete an approved basic training course within one year of employment.). The Iowa Law Enforcement Academy (ILEA) administers this basic 40-hour program and the law requires continuing education training. (attachment 30)

- **The statewide communications plan includes effective, reliable interoperable communications systems among EMS, 9-1-1, emergency management, public safety, public health and health care agencies.**

  The statewide communication plan was last updated in 2002 and does not address these issues (attachment 58).

- **Each State should develop a statewide communications plan that defines State government roles in EMS system communications.**

  The System Standards developed by the Department address communication issues that are to be addressed on a local level (attachment 23, section 3). These include having a

communication plan, two-way communication equipment, dispatch centers and coordination of the system.

Previous Assessment Recommendations

• Update the EMS communications plan by conducting a study that should include:
    - A user's survey concerning the adequacy of the system and any problems that are being experienced by the users of the system;
    - A survey of current VHF coverage to determine the extent and quality of the coverage and any deficiency areas;
    - An inventory of the equipment currently being used in the system;
    - A cost analysis for replacing aging equipment; and
    - Optional methods, including costs, of enhancing the EMS radio communications system to allow for improvement of medical direction.
• Using the results of the communications study, make efforts to secure sufficient equipment monies to provide matching funds to assist local entities in replacing communications equipment.
• Secure funding for the EMS communications coordinator position to allow it to assume a strong role in the management and direction of the statewide EMS communications system.
• In addition, the EMS Communications Coordinator should be responsible for developing Iowa EMS dispatch standards and an EMS dispatch training program.

Progress Since Previous Assessment

Communication plan was updated in 2002

Enhanced 911 implemented

G. Trauma Systems

Each State should maintain a fully functional trauma system to provide a high quality, effective patient care system. States should implement legislation requiring the development of a trauma system, including:

- **Trauma center designation, using American College of Surgeons Committee on Trauma guidelines as a minimum;**

  For Level 1 (Resource) facilities, the Department has adopted the 2006 Resources for Optimal Care of the Injured Patient (attachment 7). Levels II, III and IV requirements are state specific and based on the ACS criteria (attachments 35-37). Hospitals verified by the ACS are accepted as meeting the Department's requirements (IAC 641—134.2(7)j). Currently the inclusive state trauma system is composed of the following:

  1. Iowa has 2 Level I TCFs, ACSVRC verified
  2. Iowa has 2 level II TCFs, ACSVRC verified.
  3. Iowa has 2 level II TCFs, state verified.
  4. Iowa has 19 level III TCFs, state verified.
  5. Iowa has 93 level IV TCFs, state verified by application only.

- **Trauma field triage and transfer standards for trauma patients;**

  The Out-of-Hospital Trauma Triage Destination Decision Protocol, based on the CDC Guidelines for Field Triage of Injured Patients, (attachment 18, pp. 79, 80) is adopted *by IAC 641—135.2(1)a*.

- **Data collection and trauma registry definitions for quality assurance, using American College of Surgeons Committee on Trauma National Trauma Data Standards, as soon as practicable**

  The State of Iowa currently utilizes Collector (a Digital Innovations software product) for data collection. The Iowa Department of Public health is transitioning to Image Trend's patient care report data collection system, conducting pilots, and has scheduled a timetable for education and training to be offered to all TCFs in the state with a go live date of July 1, 2015 (attachment 40). Find attached the NTDS Data Dictionary (attachment 38) and the Iowa Department of Public Health data dictionary (attachment 39), which are used in guiding the data elements of Image Trend's data collection system.

- **Systems management and quality assurance; and**

  System evaluation is managed through the Trauma System Advisory Council (TSAC). The System Evaluation Quality Improvement Committee (SEQIC) was developed in the late 1990s. This committee identified in-hospital and out-of-hospital trauma indicators that have been used to

evaluate the status of Iowa's trauma system for more than a decade. SEQIC was a standalone committee until 2013. Due to administrative changes, the committee was incorporated as a sub-committee under TSAC. The committee's name was changed to System Evaluation Quality Improvement Sub-committee (SEQIS) and is currently re-establishing committee membership and reviewing and updating the committee's mission and scope.

- **Statewide Trauma System Plan, consistent with the Health Resources and Services Administration Model Trauma System Planning & Evaluation Document.**

  In February 2015 the Department completed an ACS review (attachment 41). While waiting for the final report, the Department has moved forward in developing an action plan to implement the recommendations (attachment 42), this will include a full re-write of a Statewide Trauma System Plan.

  The Trauma Plan was developed in 1994 (attachment 63).

Previous Assessment Recommendations

• Adopt legislation specifically authorizing trauma center designation and system development to include the following:
    - The designation process must adhere to ACEP and ACS/COT standards or their equivalent;
    - System development must include all affected institutions; and
    - System implementation must be accompanied by triage, transport, and transfer criteria and protocols.
    - Adopt a statewide trauma register, with hospital and systems components for the following:
        - Systems management; and
        - Quality assurance.
        - Adopt mandatory autopsy legislation.
        - Assure early access of trauma patients to full rehabilitation services.
        - Utilize systems information to enhance and direct prevention activities.

Progress Since Previous Assessment

Legislation was adopted to designate trauma care facilities which include the recommendations for designation, triage, transport and transfer.

A statewide trauma registry has been implemented.

H. Public Information and Education

Public awareness and education about the EMS system are essential to a high quality system. Each state should implement a public information and education (PI&E) plan to address:

- **The components and capabilities of an EMS system;**

  IDPH has a full communication plan (attachment 49) as well as an emergency response communication plan (attachment 50). Public information is provided through the Department's Communication Director through press releases, and social media that include Facebook and Twitter. Press Release templates and radio PSA's are available on the Website. The EMS system has its own Facebook page, administered by Bureau staff.

  Section 7 of the System Standards addresses (attachment 23) PI&E on the system level. The EMS for Children program conducts a variety of PI& E campaigns concerning injury prevention, pediatric readiness, and system promotion. The bureau participates in various activities during EMS Week each year to promote the understanding of Iowa's EMS System.

- **The public's role in the system;**

  Examples below-website MP3

- **The public's ability to access the system;**

  Examples below website MP3

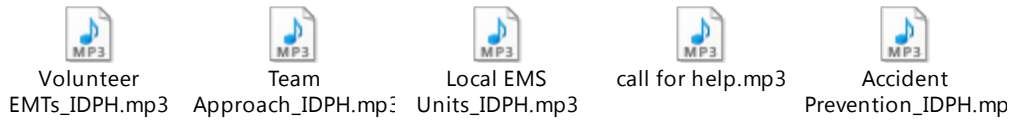
- **What to do in an emergency (e.g., bystander care training);**

  Examples below website MP3

- **Education on prevention issues (e.g., alcohol or other drugs, occupant protection, speeding, motorcycle and bicycle safety);**

  Examples below website MP3

- **The EMS providers' role in injury prevention and control; and**



- **The need for dedicated staff and resources for PI&E.**

  The Bureau of Emergency and Trauma Services has experienced staff in communications. BETS in collaboration with the Department of Homeland Security and Emergency Management provide CDC's Crisis and Emergency Risk Communication Course (CERC), and FEMA's Public

Information Officer Awareness Course (G 289) and the Basic Public Information Officer Course (G 290) (attachment 64) throughout the state to emergency preparedness and response partners.

Previous Assessment Recommendations

• An effective PI&E effort is essential to gaining the public's long term support for and appropriate use of the EMS system.
• Implement a funded position to coordinate PI&E activities in the EMS Section.
• Investigate the printing of "generic" handouts and literature.
• Charge the PI&E subcommittee of the State EMS Advisory Committee with functioning as a clearinghouse for programs and materials to avoid duplication of efforts.
• Select a primary focus or theme for an annual PI&E campaign.
• Work with private industry and organizations outside of state government to support the delivery of an EMS message to the general public.

Progress Since Previous Assessment

See above

I. Medical Direction

Physician involvement in all aspects of the patient care system is critical for effective EMS operations. EMS is a medical care system in which physicians oversee non-physician providers who manage patient care outside the traditional confines of the office or hospital. States should require physicians to be involved in all aspects of the patient care system, including:

- **A state EMS Medical Director who is involved with statewide EMS planning, overseeing the development and modification of prehospital treatment protocols, statewide EMS quality improvement programs, scope of practice and medical aspects of EMS provider licensing/disciplinary actions;**

  The Bureau of Emergency and Trauma Services (BETS) works closely with the physicians of EMSAC to address medical director issues. The Quality Assurance, Standards and Protocol sub-committee of EMSAC is chaired by a physician from EMSAC. The committee develops the State protocols and the statewide EMS quality improvement program. The EMSAC physicians serve as peer reviewers for investigations involving patient care. In 2002 the emergency response and EMS medical director resigned and has not been replaced.

- **On-line and off-line medical direction for the provision of all emergency care including pediatric medical direction, when needed and the authority to prevent an EMS provider from functioning based on patient care considerations;**

  Local medical directors establish on-line (*IAC 641—132.9(6)*) and off-line (*IAC 641—132.9*) medical direction for services. Local medical directors have the ability to remove providers from service program participation (*IAC 641--132.9(2)j*).

- **Audit and evaluation of patient care as it relates to patient outcome, appropriateness of training programs and quality improvement.**

  The medical director duties described in *IAC 641—132.9(2)* include evaluating the patient care provided by the service and its emergency medical care providers. The medical director is also responsible for assessing continuing education needs and establishing measurable outcomes and approving the quality improvement process of the service.

  <u>Previous Assessment Recommendations</u>

- Provide a state EMS medical director for the EMS Section to address medical issues and be available as a resource for local medical directors.
- Encourage uniform provision of medical direction, through the creation of statewide protocols.
- Create a medical director education and policy program. Consider the Iowa chapter of the American College of Emergency Physicians as a resource organization to assist in developing this program.
- Develop standardized on-line medical direction policies.
- Provide training for on-line designees.
- Include medical direction of basic EMS services as part of basic care legislation.
- Implement regional triage and transfer protocols.

Progress Since Previous Assessment

EMS Medical Direction is provided by members of the EMSAC.

State-wide protocols have been established but can be modified on a local level.

Medical Directors are required to complete a Medical Director Workshop within the first year of holding the position.

On-line medical direction policies have been adopted in rule

All services are required to have medical direction.

J. Preparedness

EMS is a critical component in the systematic response to day-to-day emergencies as well as disasters. Building upon the day-to-day capabilities of the EMS system each State should ensure that EMS resources are effectively and appropriately dispatched and provide prehospital triage, treatment, transport, tracking of patients and documentation of care appropriate for the incident, while maintaining the capabilities of the EMS system for continued operations, including:

Clearly defining the role of the State Office of EMS in preparedness planning and response including their relationship with the State's emergency management, public health and homeland security agencies;

- **Establishing and exercising a means to allow EMS resources to be used across jurisdictions, both intrastate and interstate, using the Emergency Management Assistance Compact and the National Incident Management System;**

The IDPH Bureau of Emergency and Trauma Services is inclusive of all public health preparedness activities. IDPH administers the hospital and public health preparedness program grants to local partners through Healthcare Preparedness Coalitions. In 2012 a HPP Capabilities and Functions document (attachment 53) applicable to EMS was completed and shared with coalition partners as guidance and encouragement to engage with local EMS.

EMS is listed as an essential partner in Capability 1 of the hospital and public health preparedness capabilities document. Capability 1 has been initiated in all coalitions and will be completed/demonstrated by 2017. In Capability 10, coalitions are required to coordinate healthcare surge operations with EMS; coalitions will complete/demonstrate capability 10 by 2017.

The staff of BETS are trained in NIMS and require all healthcare coalition members to document compliance with NIMS through contractual obligations.

The State of Iowa is a member of EMAC, the current national chair position is held by the Operations and Response Division Director at the Iowa Department of Homeland Security. In the floods of 2008 EMAC was utilized by the state to bring in assistance, during the Katrina response staff from the Iowa Disaster Medical Assistance teams responded to Louisiana.

- **Identifying strategies to protect the EMS workforce and their families during a disaster;**

  The Epidemiology Annex to the IDPH Emergency Response Plan (attachment 52) details how IDPH will implement strategies to prevent and control disease, poisoning, or condition. Priority populations will be determined according to the disease presentation and essential services. IDPH will:

  - Define the target audience.
  - Determine the most effective mechanism to communicate with the target audience.
  - Identify the appropriate prevention and control measures. The least restrictive most effective measures should be used. Examples include the use of quarantine, isolation, pharmaceutical intervention, travel restrictions, and social distancing.
  - Provide guidance to healthcare providers, hospitals, local government, law enforcement, EMS, private business, the general public, and other appropriate partners.

- **Written protocols, approved by medical control, for EMS assessment, triage, transport and tracking of patients during a disaster;**

  IDPH does not currently have an electronic statewide patient tracking system. Numerous systems have been reviewed and discussed. Infrastructure and cost are a barrier. For mass casualties, START and JumpSTART triage is identified in the service protocols (Attachment 18, pp. 88, 89). There is not a statewide protocol for disaster or mass casualty.

- **A current statewide EMS pandemic influenza plan; and**

  The Iowa Department of Public Health Emergency Response Plan serves as the base plan for all public health disasters that may occur in the state. The Iowa Department of Public Health operates under the state authorities identified in the following Iowa Code and Administrative Rules.

  Iowa Code:
  - Code of Iowa Chapter 29C - Emergency Management and Security
  - Code of Iowa Chapter 135 - Department of Public Health
  - Code of Iowa Chapter 136 B - Radon Testing
  - Code of Iowa Chapter 136 C - Radiation Machines and Radio Active Materials
  - Code of Iowa Chapter 139A - Communicable and Infectious Diseases and Poisonings

  Iowa Administrative Code:
  - Iowa Administrative Code 605 – Emergency Management
  - Iowa Administrative Code 641 – Public Health

  The IDPH plans flow chart (Attachment XXX) demonstrates the annexes related to infectious disease and epidemiology. There is not a stand-alone pandemic influenza plan as this would be redundant to the plan as written.

- **Clearly defining the role of emergency medical services in public health surveillance.**

  Epidemiology Annex to the IDPH Emergency Response Plan (attachment 65)

K. Evaluation

Each State should implement a comprehensive evaluation program to assess effectively and to improve a statewide EMS system. State and local EMS system managers should:

- **Evaluate the effectiveness of services provided to victims of medical or trauma-related emergencies;**

  641—130.2(147A) Purpose. The EMS advisory council shall advise the director and develop policy recommendations concerning the regulation, administration, and coordination of emergency medical services in the state.

  641—130.7(147A) Subcommittees. The advisory council may designate one or more subcommittees to perform such duties as may be deemed necessary.

  a. QASP-Quality Assurance Standards and Protocol

  132.8(3) Service program operational requirements. Ambulance and non-transport service programs shall:
  Implement a continuous quality improvement program that provides a policy to include as a minimum:
  (1) Medical audits.
  (2) Skills competency.
  (3) Follow-up (loop closure/resolution).

- **Define the impact of the system on patient care and identify opportunities for system improvement;**

  The QASP sub-committee has mostly focused on protocols and scope of practice issues. Recently the committee has begun to discuss quality assurance issues that can be monitored, see chart below. The sub-committee also works with the Trauma Services Advisory Council and the recently formed Stroke Quality Assurance committee formed under the Coverdell grant. One of the issues these committees have identified concern the quality of EMS data. It is hoped that these data quality issues will improve with implementation of the NEMSIS 3 based data dictionary and utilization of new PCR software.

- **Evaluate resource utilization, scope of service, patient outcome, and effectiveness of operational policies, procedures, and protocols;**

  Attachment 54: CQI Policy and Appointments

- **Evaluate the operation of regional, accountable emergency care systems including whether the right patients are taken to the right hospital;**

  Patient transport decision are monitored on the local level with the medical director being responsible for monitoring the activities of the service (*IAC 641—132.9(2)*).

- **Evaluate the effectiveness of prehospital treatment protocols, destination protocols and 9-1-1 protocols including opportunities for improvement;**

  The Annual EMS Report Template (attachment 57) utilizes measureable outcomes and outputs shown in the table below. Each service is required to function under a CQI policy to measure outcomes and identify opportunities for improvement.

One full set of vital signs and the GCS will be completed on adult and pediatric patients.	95%
Multiple, complete sets of vital signs and the GCS will be documented on patients with transportation times greater than 15 minutes.	75%
Eligible chest pain patients will receive aspirin (ASA) per protocol before transport.	90%
Suspected stroke patients will receive a neurological examination per protocol.	90%
Scene time for trauma patients with time critical injuries shall be 10 minutes or less.	90%
Reason for use of lights & sirens to the scene will be documented	75%
Reason for use of lights & sirens to the destination will be documented	75%

- **Require EMS operating organizations to collect NEMSIS compliant data to evaluate emergency care in terms of the frequency, category, and severity of conditions treated and the appropriateness of care provided;**

  132.8(3) Service program operational requirements. Ambulance and non-transport service programs shall:
  a. Complete and maintain a patient care report concerning the care provided to each patient. Ambulance services shall provide, at a minimum, a PCR verbal report upon delivery of a patient to a receiving facility and shall provide a complete PCR within 24 hours to the receiving facility.

  132.8(7) The Iowa EMS Patient Registry Data Dictionary identified in 641—paragraph 136.2(1)*"c"* is adopted and incorporated by reference for inclusion criteria and reportable patient data. The dictionary is NEMSIS 2 compliant.
  b. The department shall prepare compilations for release or dissemination on all reportable patient data entered into the EMS service program registry during the reporting period. The

compilations shall include, but not be limited to, trends and patient care outcomes for local, regional, and statewide evaluations. The compilations shall be made available to all service programs submitting reportable patient data to the registry.
c. Access and release of reportable patient data and information.
(1) The data collected by and furnished to the department pursuant to this subrule are confidential records of the condition, diagnosis, care, or treatment of patients or former patients, including outpatients, pursuant to Iowa Code section 22.7. The compilations prepared for release or dissemination from the

132.9(2) the medical director's duties include, but need not be limited to:
a. Developing, approving and updating protocols to be used by service program personnel that meet or exceed the minimum standard protocols developed by the department.
b. Developing and maintaining liaisons between the service, other physicians, physician designees, hospitals, and the medical community served by the service program.
c. Monitoring and evaluating the activities of the service program and individual personnel performance, including establishment of measurable outcomes that reflect the goals and standards of the EMS system.
d. Assessing the continuing education needs of the service and individual service program personnel and assisting them in the planning of appropriate continuing education programs.
e. Being available for individual evaluation and consultation to service program personnel.
f. Performing or appointing a designee to complete the medical audits required in subrule 132.9(4).
g. Developing and approving an applicable continuous quality improvement policy demonstrating type and frequency of review, including an action plan and follow-up.

132.9(4) the medical director or other qualified designees shall randomly audit (at least quarterly) documentation of calls where emergency medical care was provided. The medical director shall randomly review audits performed by the qualified appointee. The audit shall be in writing and shall include, but need not be limited to:
a. Reviewing the patient care provided by service program personnel and remedying any deficiencies or potential deficiencies that may be identified regarding medical knowledge or skill performance.
b. Response time and time spent at the scene.
c. Overall EMS system response to ensure that the patient's needs were matched to available resources including, but not limited to, mutual aid and tiered response.

- **Assure protection from discoverability of EMS and trauma peer review data;**

132.8(6) (1) The data collected by and furnished to the department pursuant to this subrule are confidential records of the condition, diagnosis, care, or treatment of patients or former patients, including outpatients, pursuant to Iowa Code section 22.7. The compilations prepared for release or dissemination from the data collected are not confidential under Iowa Code section 22.7, subsection 2. However, information which individually identifies patients shall not be disclosed, and state and federal law regarding patient confidentiality shall apply.
(2) The department may approve requests for reportable patient data for special studies and analysis provided the request has been reviewed and approved by the deputy

director of the department with respect to the scientific merit and confidentiality safeguards, and the department has given administrative approval for the proposal. The confidentiality of patients and the EMS service program shall be protected.

- **Ensure data-gathering mechanism and system policies that provides for the linkage of data from different data sources through the use of common data elements;**

  132.8(7) The Iowa EMS Patient Registry Data Dictionary identified in 641—paragraph 136.2(1)*"c"* is adopted and incorporated by reference for inclusion criteria and reportable patient data. The dictionary is MEMSIS 2 compliant.

  b. The department shall prepare compilations for release or dissemination on all reportable patient data entered into the EMS service program registry during the reporting period. The compilations shall include, but not be limited to, trends and patient care outcomes for local, regional, and statewide evaluations. The compilations shall be made available to all service programs submitting reportable patient data to the registry.

  BETS completes reports from the data submitted.

- **Ensure compatibility and interoperability of data among local, State and national data efforts including the National EMS Information System and participation in the National EMS Database;**

  The local data collected in Iowa is submitted as per rule per the format required. BETS transitioned to using the Image Trend System on April 1, 2015. All data has been transmitted to NTDB, TQIP and NEMSIS.

- **Evaluate both process and impact measures of injury prevention, and public information and education programs; and**

  Iowa is not set up in a "regional" structure. However, many of these organizations sponsor events in local communities. It is common before local events such as homecomings and proms for these organizations to sponsor safe teen driver events focusing on not drinking and driving. There has also been a significant push to educate about the dangers of texting and driving through the Zero Fatalities campaign.

  Injuries associated with motor vehicles, both road vehicles and all-terrain vehicles (ATV). The following initiatives have been implemented:

  NHTSA Child Passenger Safety certification training,
  Child safety seat check-up events,
  Child safety seat inspection stations,
  Law enforcement sTEPP enforcement events
  ATV-school education program, prevention tool kit, agricultural education program

To date there has not been a formalized evaluation process of overall prevention activities. Various projects, if built into the funding mechanism, provided individual project evaluations. The biggest gap is the lack of one centralized statewide injury prevention program. Projects around the state are dependent upon various sources of funds and data provided by CDC WISQARS and FARS

- **Participate in the State Traffic Records Coordinating Committee (TRCC) – a policy-level group that oversees the State's traffic records system, to develop and update a Statewide Traffic Records System Strategic Plan that ensures coordination of efforts and sharing of data among various State safety data systems, including EMS and Trauma Registry data.**

  The department is a member of the steering committee for the Statewide Traffic Records Coordinating Committee and participates in both the executive and full committee meetings. STRCC website http://www.iowadot.gov/tsda/strcc.html

Previous Assessment Recommendations

• Develop system performance standards to be used to evaluate the care provided by all levels of EMS providers throughout the State.
• Develop a statewide prehospital run report form that contains the data required to evaluate the effectiveness of prehospital care.
• Collect and analyze the data generated to evaluate local, regional, and statewide compliance with the established performance standards.
• Encourage increased physician participation in review of the compliance with prehospital clinical treatment protocols.
• Explore support from other sections of the Iowa Public Health Department in information system design and data analysis.

Progress Since Previous Assessment

System performance standards are developed on a local level.

Medical directors are required to participate in local continuous quality improvement.